

Preliminary Results from the Rhode Island Violent Death Reporting System (RIVDRS)

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The surveillance and control of morbidity and mortality from unintentional injuries, including injuries from motor vehicle crashes, occupational injuries, sports injuries, injuries from falls, etc., receive a great deal of public health attention. The role of public health in the surveillance and control of intentional injuries due to violence against self or others is less well-developed. However, in 2002, the number of victims of suicide and homicide in the United States, although underreported, exceeded the number who died in motor vehicle crashes.¹ In addition, homicide is the leading cause of death among young black males 15-34 years of age.¹

The national Centers for Disease Control and Prevention (CDC) became involved in injury prevention in the 1970s and established the National Center for Injury Prevention and Control (NCIPC) in 1992.² The National Violent Death Reporting System (NVDRS), a surveillance system for intentional injury deaths, is supported through cooperative agreements between seventeen currently participating states and the NCIPC. The Rhode Island Department of Health was first funded for violent death reporting in August 2003, the second year of the national project. This new system includes homicides, suicides, deaths with undetermined intent, and unintentional firearms deaths.

Methods. RIVDRS staff abstract and electronically enter data that is routinely collected on deaths under the jurisdiction of the Office of State Medical Examiners (OSME). A contractor to CDC provides NVDRS database software that assures standard formats. Daily review of entries in the Medical Examiner Log is the source of the case list for violent death reporting in Rhode Island. Detailed information for each case becomes available over time. For example, initial police reports are used as available, but more complete reports are requested for homicides six months *post mortem*. Data collection for most cases is expected to be completed within six months of the death. Additional information on weapons used in homicides is abstracted from the files of the State Crime Laboratory.

Rates of deaths per 100,000 population were calculated using population estimates for Rhode Island as of July 1, 2004, from the US Bureau of the Census.³

Results. Two hundred forty-five violent deaths were reported in Rhode Island in 2004, including 36 homicides (14.7%), 86 suicides (35.1%), and 123 deaths with undetermined intent (50.2%). Male victims (73.1%) of violent death far outnumbered female victims

(26.9%), and males made up the majority in each manner of violent death.

Persons aged 35-54 make up the majority of violent deaths (55.3%), as deaths in that age range predominate in the two larger categories, suicides and deaths with undetermined intent. The number of male deaths was highest in the age group 35-44 years while the number of female violent deaths peaked in the age group 45-54 years. (Figure 1) In Rhode Island, crude rates for both homicide

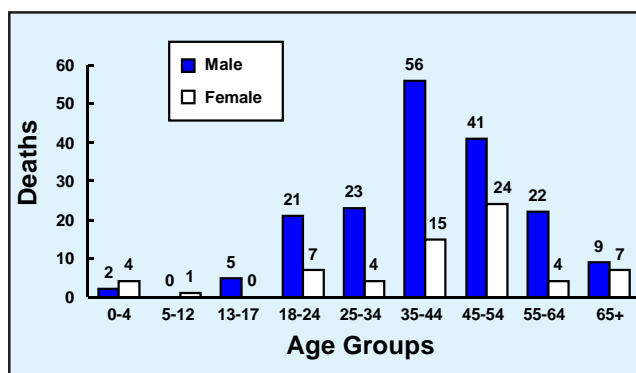


Figure 1. Violent deaths, by age group, by sex, Rhode Island, 2004.

(3.3 per 100,000 population) and suicide (8.0) were lower in 2004 than the comparable rates in the United States for homicide (6.3) and suicide (11.0) in 2002.

For violent deaths as a whole, the distribution by race and Hispanic origin approximated that in the general population, but the distribution differed widely by manner of death. (Table 1) White males had the highest rate of suicide (14.9 per 100,000 population) and accounted for the majority of suicides (73.1%), Hispanic males had the highest homicide rate (19.8 per 100,000) in Rhode Island in 2004, and Black males had the highest rate for deaths with undetermined intent (22.9 per 100,000). The patterns were different for females, but female deaths by category were so few that age group- or race-specific rates may not be stable. For violent deaths

Table 1. Violent deaths per 100,000 population, by manner of death, race/ethnicity, and sex, Rhode Island (2004) and United States (2002)

Manner of Death	White		Black		Hispanic	
	Male	Female	Male	Female	Male	Female
	Rhode Island					
Homicide	2.9	0.7	11.5	3.8	19.8	1.8
Suicide	14.9	2.6	7.6	3.8	7.2	0
Undetermined intent	14.4	7.1	22.9	7.7	10.8	3.6
All violent deaths	32.1	10.4	42.0	15.4	37.7	5.3
United States						
Homicide	3.9	1.9	40.1	7.2	13.6	2.7
Suicide	21.9	5.3	9.3	1.6	8.3	1.6
Undetermined intent	2.3	1.3	2.9	1.2	1.2	0.4
All violent deaths	28.1	8.5	62.3	9.9	23.1	4.7

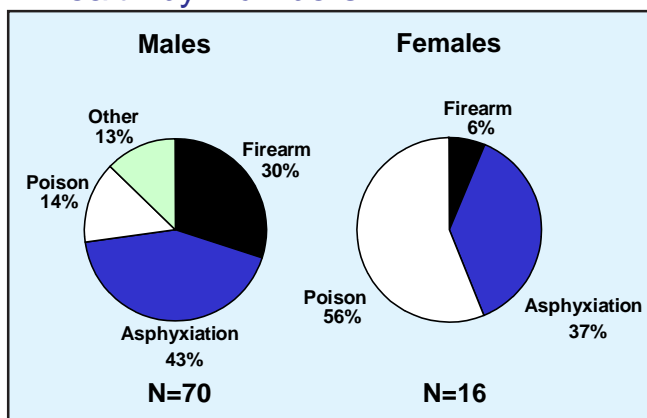


Figure 2. Suicides, by sex, by means or weapon used, Rhode Island, 2004.

as a whole, Blacks experienced the highest rates among males, females, and both sexes combined.

Drug overdoses were the cause of most deaths with undetermined intent for both sexes, but the means of suicide varied by sex. (Figure 2) Firearms were used in over 30% of male suicides while only one female suicide victim used a firearm. Most female suicides died by means of poison (drug overdose), but relatively few men did. Similarly, firearms were the weapon in a majority of male (61%) but not female (40%) homicides. (Figure 3)

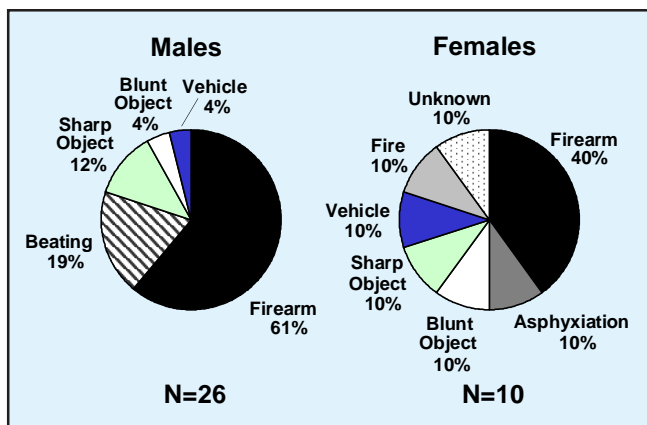


Figure 3. Homicides, by sex, by means or weapon used, Rhode Island, 2004.

Discussion. Rhode Island rates for homicide and suicide generally fall below US rates, but RI rates for deaths with undetermined intent are much higher than nationally. Most deaths with undetermined intent in Rhode Island in 2004 (92%) were due to drug overdoses that usually involved a fatal event at the end of long-term, chronic use of illegal drugs. These deaths are distinguished from suicides by the absence of an expressed intention and a greater proportion for whom street drugs were the cause of death. The distribution by sex and age for undetermined intent deaths is similar to that for suicides but different from the pattern for homicides. Nationally, the manner of death assigned for drug overdoses is usually unintentional poisoning, but practices at OSME assigns them to undetermined intent. This provides RIVDRS with a unique opportunity to analyze information on drug overdose deaths, a subject for future study.

Results from NVDRS and RIVDRS contribute to the developing national public health effort to prevent violence and will also be used locally to identify specific risk factors and subpopulations at high risk of violent death. These data will also be used to evaluate interventions aimed at reducing violence and resulting mortality. The use of multiple sources of information and the specific focus of RIVDRS promise significant enhancements in completeness and timeliness of the reporting of violent deaths over the existing national system of mortality reporting.

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1. Web-based Injury Statistics Query and Reporting System (WISQARS) http://webappa.cdc.gov/sasweb/ncipc/mortrate10_sy.html
2. National Center for Injury Prevention and Control <http://www.cdc.gov/ncipc/about/about.htm>
3. Bureau of the Census: Population estimates <http://www.census.gov/popest/datasets.html>

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